REMARKS

Claim 1 is amended to recite "a transparent lens attached to said stack by a bond effected at an interface disposed between said lens and said stack, wherein said bond does not include epoxy." This amendment is supported by, for example, page 2, lines 7-22, which discuss problems with and disadvantages of placing epoxy encapsulants adjacent to the semiconductor stack, and page 10, lines 9-15, which discusses improvements of the present invention over a semiconductor stack placed in epoxy encapsulant or air.

The references cited in an information disclosure statement filed with the request for continued examination were cited in an office action in a continuation-in-part of the present application. Three of the references, Goossen, U.S. Patent 5,698,452, Seki et al. U.S. Patent 5,553,089, and Plaster, U.S. Patent 4,675,058 were used to reject the claims in the continuation-in-part applications. The other references were not relied upon.

Goossen et al. teaches at column 4, lines 11-13, "a transparent material suitable for bonding the mesas 48 to the to the photonic devices 2, such as a transparent epoxy." Epoxy is the only material Applicants can find described in Goossen for bonding the mesas 48 to the photonic devices. Since Claim 1 states the "bond does not include epoxy," Goossen does not anticipate Claim 1.

Seki et al. teach at column 3, lines 44-49, "a convex lens 36 made of transparent epoxy resin which is a light transmissible material is attached to the first reflecting surface 34. The convex lens 36 may be formed by dropping a transparent epoxy resin on the first reflecting surface 34, immersing the first reflecting surface 34 in a transparent epoxy resin, or using a mold." Seki et al. do not discuss forming lens 36 from any material other than epoxy. Since Claim 1 states the "bond does not include epoxy," Seki et al. do not anticipate Claim 1.

Regarding Plaster, Claim 1 recites "a bond at an interface disposed between said optical element and said stack." As is clear from Fig. 2D of Plaster, Plaster does not teach a

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bond between a optical element and a stack as recited in Claim 1. Fig. 2D shows a microlens 212 that simply rests on the edges of metal electrical contact area 210, and does not form a bond with the semiconductor layer stack. Accordingly, Plaster does not anticipate Claim 1.

An information disclosure statement filed with the present submission lists U.S. Patent 6,412,971 to Wojnarowski et al. which teaches at column 5, lines 37-40 "in one embodiment, as shown in Fig. 10, the reradiative component comprises a plurality of lenses 64 with each lens being situated over a respective one of the LESDs. In one embodiment, lenses 64 are attached by a bonding glue." Since a person of skill in the art would understand "bonding glue" to refer to epoxy, Wojnarowski et al. do not anticipate Claim 1.

In view of the above arguments, Applicants respectfully request allowance of all pending claims. Should the Examiner have any questions, the Examiner is invited to call the undersigned at (408) 382-0480.

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ATTACHMENT A

IN THE CLAIMS

Claims are amended as follows:

1. (Twice Amended) A light emitting device having a stack of layers including semiconductor layers comprising an active region, said device comprising:

a transparent lens attached to said stack by a bond effected at an interface disposed between said lens and said stack, wherein said bond does not include epoxy.

6. (Twice Amended) The light emitting device of Claim 1, wherein said lens is formed from a material selected from the group of zirconium oxide, sapphire, GaP, ZnS, materials containing lead oxide, materials containing tungsten oxide, and SiC.

23. (Twice Amended) The light emitting device of Claim 20, wherein said lens is formed from a material selected from the group of zirconium oxide, sapphire, materials containing lead oxide, materials containing tungsten oxide, SiC, and ZnS, said superstrate is formed from a material selected from the group of SiC, GaN, and sapphire, and said semiconductor layers comprise III-Nitride semiconductors.

24. (Twice Amended) The light emitting device of Claim 20, wherein said lens is formed from a material selected from the group of zirconium oxide, sapphire, materials containing lead oxide, materials containing tungsten oxide, SiC, ZnS, and GaP, said superstrate is formed from a III-Phosphide material, and said semiconductor layers comprise a material selected from the group of III-Phosphide semiconductors and III-Arsenide semiconductors.

35. (Twice Amended) The light emitting device of Claim 32, wherein said lens is formed from a material selected from the group of zirconium oxide, sapphire, materials containing lead oxide, materials containing tungsten oxide, SiC, and ZnS, said superstrate is

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formed from a material selected from the group of SiC, GaN, and sapphire, and said semiconductor layers comprise III-Nitride semiconductors.

36. (Twice Amended) The light emitting device of Claim 32, wherein said lens is formed from a material selected from the group of zirconium oxide, sapphire, materials containing lead oxide, materials containing tungsten oxide, SiC, ZnS, and GaP, said superstrate is formed from a III-Phosphide material, and said semiconductor layers comprise a material selected from the group of III-Phosphide semiconductors and III-Arsenide semiconductors.

48. (Twice Amended) The light emitting device of Claim 47 wherein said lens comprises a material selected from the group of zirconium oxide, sapphire, materials containing lead oxide, materials containing tungsten oxide, SiC, and GaP.

50. (Twice Amended) The light emitting device of Claim 49 wherein said lens comprises a material selected from the group of zirconium oxide, sapphire, materials containing lead oxide, materials containing tungsten oxide, SiC, and ZnS.

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